

# Aircrew

*Facts, opinions, pictures and fun*

*October 2019*

<https://northreppsmfc.com/>



I am relieved to say that everyone seems to have received his or her newsletter last month. I welcome contributions from you. New stuff on internal combustion engines would be great. Don't forget to put the Annual General Meeting in your diary for 1<sup>st</sup> December at 15:00. To contact me send an email to [peter@northreppsmfc.com](mailto:peter@northreppsmfc.com)

## **Contents**

BMFA News	2
Model of the month: Heinkel He 111Z (Zwilling)	3
Binham Flyin 8 <sup>th</sup> September 2019	3
Genius: Number 2: a clever wing bag design	4
Books: Haynes aircraft manuals	5
Pillock of the month	6
Manoeuvre of the month: The Sausage	6
Invitation to a BMFA workshop	6
Spot the fault	7
Servo power distribution boxes	7
Caption competition	8
Another health warning: caramel waffles	9
Sources	9
Sales	10
(Click to jump to the page)	

Copyright: Unlike writing for magazines, anything you write, design or photograph for this newsletter remains your copyright or intellectual property. Your name will appear at the end of the article or under the picture. Any quoted material that I use will be with permission or under the fair usage rule for non-commercial use.

## BMFA News

Dave has already circulated this latest update from the BMFA but it is worth putting on record that things look more promising. This is the message that Dave Phipps the Chief Executive of the BMFA sent round in case you didn't get around to reading Dave Wilcox's message. I note that no mention is made of free-flight, only control line.

The last paragraph is the most encouraging, provided the CAA and DfT use the words 're-set' in the same way that the rest of us do, meaning a restart from scratch. Alternatively it could mean to add some further gunk to make sure that the current situation is more firmly set as it is now. How could I think such a thing? Anyway whilst all the great deep-thinking ones exercise their leetle grey cells we can forget it for a while and just enjoy our flying. Oh, and don't register until the BMFA advises us to.

*"I published an update on the BMFA website on 23rd August (<https://bmfa.org/News/News-Page/ArticleID/2608/An-update-on-the-UK-regulations-for-model-flyers>) which provided a summary of our position at that time. This was also going to be the basis of my article for the forthcoming issue of the BMFA NEWS.*

*"However, the very next day I received a telephone call to tell me that the new Secretary of State for Transport (the Rt Hon Grant Shapps MP) had picked up the case for us and would 'be in touch'.*

*"A few days later I received an invitation to attend a meeting with Grant at the Houses of Parliament. This meeting took place on Monday the 9th September and involved me (on behalf of the UK Model Flying Associations), Graham Brown from ARPAS (on behalf of commercial drone operators) and high-level delegations from both the CAA and DfT. The outcome of the meeting was that the CAA and DfT have been tasked to work in collaboration with us*

*urgently to try and find an acceptable way forward. This is very much work in progress and as such I cannot provide much definitive information at this time. Please monitor the BMFA website and Facebook page for further updates in due course.*

*"However, what I can confirm already is that those who only fly control line aircraft will be exempted from the DRES requirements and I can also confirm that registration numbers can be carried in an easily accessible location (such as within battery compartments) rather than on the exterior of model aircraft. The registration fee is also likely to be subject to a change (for the better). These items are the starting point.*

*"We would therefore encourage members not to rush into registering or taking the test when the DRES is rolled out in the next few weeks, until we have concluded our current round of discussions with the CAA and DfT and issued further guidance to members. For the time being, we would suggest that it remains 'business as usual'.*

*"Both the CAA and DfT have given a commitment to 're-set' their relationships with the model flying community and work with us in close collaboration from this point forward, a very positive development which we greatly appreciate. It's perhaps preferable to being inundated with correspondence from our magnificent members and their MP's! Thanks again to all those members who have supported our relentless campaign so far."*

## Model of the month: Heinkel He 111Z (Zwilling)

This extraordinary machine was built to tow the enormous Messerschmitt Me 321 gliders that, amongst other things, were intended for an invasion of Britain. They had limited success and at least one appalling failure killing many people in the glider. Despite having five engines, it was rather underpowered for the Me 321 so additional rockets were used. To read more go to:

[https://www.militaryfactory.com/aircraft/detail.asp?aircraft\\_id=528](https://www.militaryfactory.com/aircraft/detail.asp?aircraft_id=528)

The model had three internal combustion engines in the centre section and two electric motors outboard. The owner eventually got all three IC engines going at once and fired up the two motors for a single, rather shaky flight, after which it landed safely, to applause.



Photo Dave Wilcox

## Binham Flyin 8<sup>th</sup> September 2019

After a week that was so windy that very little flying was done, Sunday 8<sup>th</sup> dawned sunny, warm and less breezy. Pilots were queuing to get into the more welcoming air. There were some very impressive models as always, but the weirdest must be the five

engine Heinkel He 111Z (Zwilling) which is the subject of this month's Model of the Month.

Andrew Taylor, the host of the event, showed us a certificate of thanks from the Air Ambulance Service, which gets money raised at Binham. We were also treated to a glider being towed up by a tug. Altogether the NMFC had a very pleasant day and say 'thank you' for the invitation.



Photo Dave Wilcox

There are lots more of Dave's pictures on the club website under Galleries/Binham 2019



## Genius: Number 2: a clever wing bag design

Seen at the field was Dave Fines' clever wing bag. The two bags are made from insulating bubble sheet, which you can buy in B&Q. They are formed and joined using duct tape. One problem always is that the projections from the aileron and flap servos stick out and can puncture another wing pressed against it. To stop this, one bag has a sheet of cardboard on the inner side. The wings are pushed in so the projections point inwards against the card. The final stroke of genius is the tag at the bottom. You put your foot on it to hold the bags down when removing the wings.

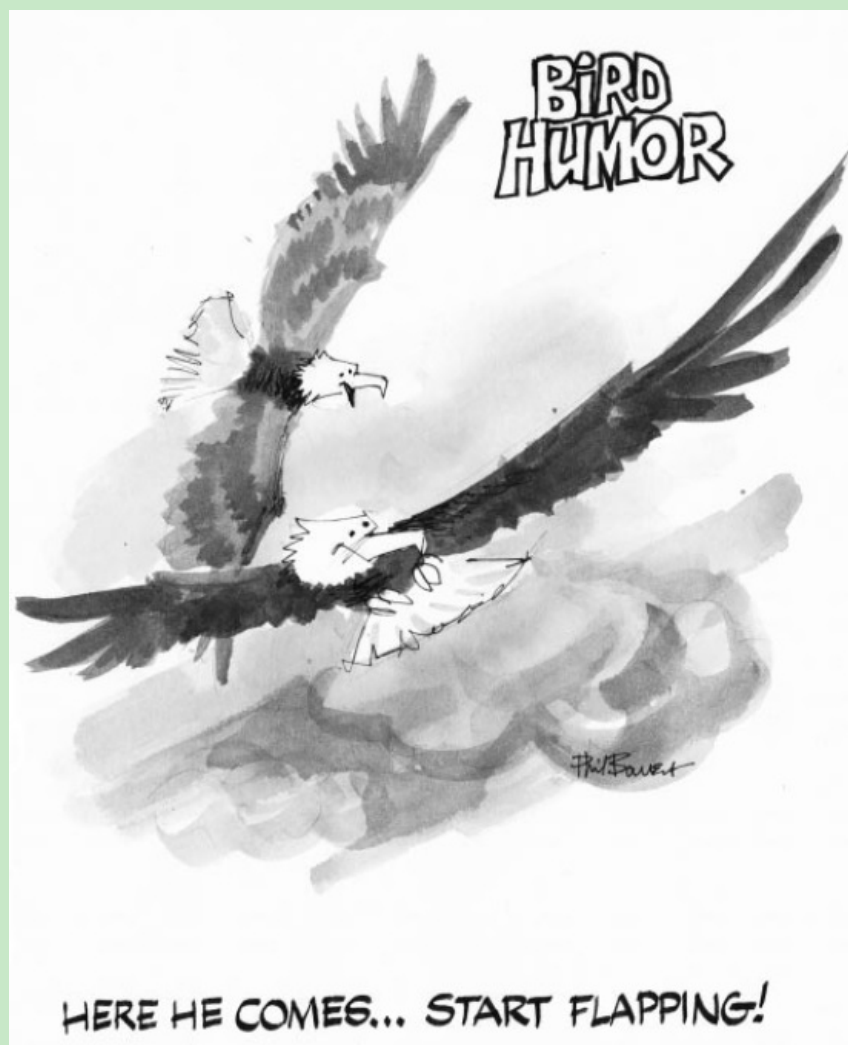


## **Books: Haynes aircraft manuals**

These are printed in exactly the same hard cover form as the car manuals that we all hated when we were forced to repair our own cars. I can only judge the quality by the Mosquito one, which is superbly researched and very thorough. I am pretty good at improving old photographs with Photoshop but I couldn't touch the quality of the restored pictures. So if you are a scale model enthusiast or want to find out more about your favourite aircraft, these books are an excellent place to look. This is the list in 2018.

Airbus 380  
Avro Lancaster  
Avro Shackleton  
Avro Vulcan  
Blackburn Buccaneer  
Boeing 707  
Boeing 747  
Boeing B-17 Flying Fortress  
Boeing B52  
Bristol Blenheim  
Concorde  
Consolidated B-24 Liberator  
Convair B-36 Peacemaker  
de Havilland Comet  
de Havilland Mosquito  
de Havilland Sea Vixen  
de Havilland Tiger Moth  
Douglas DC-3 Dakota  
Douglas Skyraider  
Empire Flying Boat  
English Electric Lightning  
Fairchild Republic A-10  
Fairey Swordfish  
Focke Wulf FW190

General Dynamics F-16  
Gloster Meteor  
Grumman F14 Tomcat  
Handley Page Halifax  
Hawker Hurricane  
Hawker Siddeley Harrier  
Junkers JU 87 Stuka  
Lockheed F-117 Nighthawk  
Lockheed SR-71 Blackbird  
McDonnell Douglas F-4 Phantom  
McDonnell Douglas F15 Eagle  
McDonnell Douglas Hornet  
Messerschmitt BF109  
North American F-86 Sabre  
North American P-51 Mustang  
North American X-15  
RAF Chinook  
RAF Tornado  
RAF Typhoon  
Rolls Royce Merlin  
S.E.5  
Short Stirling  
Sopwith Camel  
Spirit of St Louis  
Supermarine Spitfire  
Supermarine S6B  
Vickers VC10  
Vickers Wellington  
Westland Lynx  
Westland Lysander  
Westland Sea King  
Westland Wessex



Thanks to Radio Control Soaring Digest

## Pillock of the month

This is awarded to the member who did the stupidest thing during the month. It's OK. I won't be dredging up past follies – taking off with a non-charged battery, pulling 'up' from low inverted flight straight into the ground, etc. No. All that is forgotten.

I am the POTM this month. Dave said I wouldn't confess, so here it is. I was assembling my Wot4. I rested the wing in position to check that I had the aileron servo leads the right way round. I did a few other things, then thought I'll check the fail-safe. Throttled up and of course the fuselage shot forward leaving the wings behind. The aileron leads stopped it but they got tugged and one servo stopped working. Just a dislodged lead fortunately. The lesson is that I must remember my old programming dictum, 'Always finish'.

Peter

## Manoeuvre of the month: The Sausage

Training myself to fly inverted I have invented a new manoeuvre. From upright level flight you do a half loop then fly across the field inverted in level flight. Then, after another half loop, you cross the field correct way up, again in level flight. Repeat until perfect. The manoeuvre is called a 'sausage'. Repeated sausages are called a 'string of sausages'. If you do a roll on both the upright and inverted legs it is called... yes, you guessed it, a 'sausage roll'.

## Invitation to a BMFA workshop

"As part of the preparations for next year's Flightfest we are arranging a day's workshop on 2nd November at Buckminster. Paul Tallett will be fronting the programme which is heavily focused on how to improve your public relations and promotional



proficiency, specifically relating to Flightfest 2020. Whilst Flightfest is the focus I believe we all can learn new skills that overlap with your Areas, specialist groups and disciplines. Paul will explore the latest trends in electronic, social and good old fashioned print media to explore ways on how we can best use our time and energies. Please read the attached PR Guide and Flightfest booklets, also check out the Club PR website at <https://clubpr.bmfa.org>

“Following a similar thread the afternoon session will introduce a new concept, ‘Club Awards’. Andy Symons will discuss this vision with the aim of considering whether this is a plausible means to renew and increase our promotional and general interest by the introduction of a Club Awards’’ scheme.

“Anyone wishing to attend please fill in the form at <https://e-forms.bmfa.org/pr-workshop> to ensure we cater for the correct numbers.”

## Spot the fault

### Visible steps in control surface movement

This is an aerobatic model with rapid and powerful servos. After the first few twitchy flights the servo throws were reduced on the transmitter and large amounts of expo were added. The pilot noticed that when he moved the sticks by small amounts the control surfaces were moving in definite steps rather than smoothly. What is the reason and what is the cure?

### Last month’s answer

The reason

The powerful servos are overloading the receiver. Large servos take a lot of current. A receiver might be capable of working one,

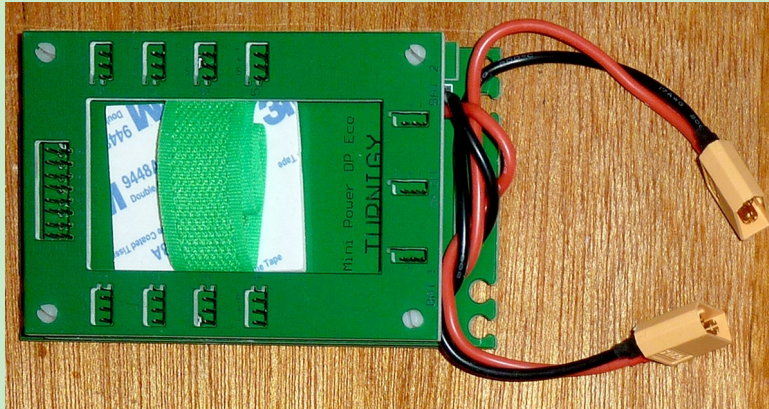
but when all of the servos are moving at once the large currents cause the voltage in the receiver to drop and the servos to become erratic. Receiver channels might be overloaded and destroyed. The tail servos are on thin extension leads so have an even bigger voltage drop. They are first to show this fault.

The cure

If the receiver is capable of driving the servos, then thicker extension wires of minimum length might cure the problem. Change to 22awg ones. A better solution is to use a power distribution box with its own batteries. This supplies the current for the servos direct from the batteries, bypassing the receiver so it has only to provide the signals. Whilst you are at it use two receiver batteries rather than one. It might also be wise to switch to 6V batteries which will reduce the current drawn by about 20%. Details of distribution boxes are in the next article.

## Servo power distribution boxes

Digital servos use more power. A high torque one, say starting at about 15kgcm, can use 2.5A and of course the more powerful and high-speed coreless ones use even more. A receiver will not be able to supply that much current and will either break or give weird signals. The solution is to use a power distribution box, like this one from Hobby King for £25, weighing 80g. It is also sold as a badged product by UK dealers such as 4Max for a slightly higher price. The receiver is strapped (or velcro’d) into the middle. The servo signal outputs from the receiver plug into the pins in a row at the top (left side in the picture). The servos plug into the holes down each side. There are two sets of pins for each channel, so two servos can be plugged in, thus avoiding Y-leads. The box passes on the signals but supplies the servo current itself, direct from the receiver batteries.



One or two receiver batteries are connected either through the XT60 connectors for 2S lipos or, if 4.8V or 6V NiMHs, plugged straight into the board. Take care though. The lowest price boxes do not have a BEC to reduce the battery voltages, so you could well blow up your receiver and servos if you use lipos and leave a power connection to the receiver.

The box shown above can manage eight channels. At a much higher price you can buy boxes that handle many more. The supplied switch need not be used as the box defaults to on, but if used it plugs into the middle socket. If you want an LED battery charge display you can plug one into an unused servo output.

The only downside that I can see, apart from the weight and cost, is that these boxes cannot be used where you want to have a single wire into a wing holding a FrSky S.BUS converter or other S.BUS servos. However you could feed an S.BUS signal into one or more input sockets and plug the wire to the S.BUS into one or more sockets so removing one of the potential overload dangers when using S.BUS with powerful servos.

## Caption competition



*Photo with permission from RCSD*

My first attempt: "Poor old Syd. Shame we didn't have a big enough body bag."

You can do better. Send them to me at [peter@northreppsmfc.com](mailto:peter@northreppsmfc.com)



## Another health warning: caramel waffles

Last month I alerted you all to the potential dangers of ticks. This month I have a more immediate threat to warn you about. Peter, and latterly Dave, have been running an addictive substance on to the flying field. This innocuous looking stuff is packed in tens, also known as four-hundreds (g). If you eat one you will never be able to stop wanting more. They are the crack-cocaine of confectionery. They originate in the Netherlands, whence they are run across the North Sea by Lidl. We all know that the Dutch have more liberal views on substances. This is what they look like:



That was the booty from a recent raid on Peter's car boot. Luckily you can see that none of the evil stuff has been consumed. You have been warned!

## Sources

The wheels available from the usual dealers are suitable for modest size models. However if you are looking for lightweight ones for large or scale models it can become difficult. An LMA member I spoke to at Binham suggested small bicycle wheels with the spokes covered by metal or wood sheet. I have done some research and found large light wheels from two suppliers. Both are in the USA but items might be available from UK or EU suppliers or on-line. For scale builders both have a huge range of other items. You can download catalogues.

Kavan: wheels up to 219 mm [www.kavanrc.com](http://www.kavanrc.com) Kavan Europe has been taken over by Pelikan Daniel. Details on the website.

Du-bro: wheels up to 203mm [www.dubro.com](http://www.dubro.com)

## Sales

Don't forget, if you have modelling items for sale let either Dave or me have the details. They will get a listing here and go on the website in the public area under 'The Shop'.

### New this month:

I am selling my SIG Hog Bipe model. It is built to a high standard and covered in SolarTex Gloss & SolarFilm. (The kit itself would now cost you £248 from Sussex Model Centre). This sale is just for the airframe, there are no servo's or engine. It does have wheels and the engine mount. Winspan is 54.5" top, 51" bottom. It is designed for a 60-65 two stroke or 65-90 four stroke. I have no doubt it could be converted to electric if desired. £75 ono.

Contact Paul McLeod 01263 722489



Dick Jordan is giving up model flying and selling his models and equipment.

Aircraft (in excellent condition)

Hitec Sky Scout. It is similar to a Bixler but a little smaller at 138cm/54.5" span. Attractive foam model complete with motor, folding propellor, transmitter, receiver and all servos. £25



Deperdussin TT, a built-up scale model of the classic 1912 monoplane flown by the French air force in World War 1. Needs some TLC. I have the rigging instructions and construction handbook. Span approx 91cm/36". It is very light so must be flown on calm days or indoors. £25



Small lightweight model. £Free



Spektrum DX6 2.4GHz £75



Other items

Ripmax mains power supply and separate charger £50



All prices o.n.o. Contact Dick on 01263 761542 or  
[richard.jordan@btconnect.com](mailto:richard.jordan@btconnect.com)